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10/714,800	11/17/2003	Heinz Hofmann	15550Z	2932

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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/714,800
Filing Date: November 17, 2003
Appellant(s): HOFMANN ET AL.

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/9/2008 appealing from the Office action mailed.

(1) Real Party in Interest

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,345,577	Cramer et al	2-2002
4,770,728	Berg et al	9-1998
6,547,899	Lee et al	4-2003
6,425,966	Highsmith et al	7-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

These claims all recite that the TATB binds the secondary explosive. This is indefinite, since in all of the examples, a powder is formed and does not show that any binding occurs merely by the addition of the TATB coating. It is unclear how any resultant binding is caused by this coating.

2. Claims 1, 3-7, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. (US 6,345,577 B1) in view of Berg et al. (US 4,770,728) in further view of Lee et al. (US 6,547,899 B2).

As to claim 1, Cramer et al. discloses a process of producing an insensitive explosive mixture (abstract) comprising TATB (col. 2 lines 52-60) in an amount less than 15% (from col. 3 lines 45-48) onto a secondary explosive ("RDX" of col. 2 lines 10-25) to form a coating of TATB on the secondary explosive which binds the secondary crystal. Not disclosed is the secondary explosive being a crystal and the TATB being sonochemically aminated. Berg, however, discloses coating crystals of the secondary

explosive (col. 2 lines 11-17); Lee et al. discloses TATB being sonochemically aminated (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Cramer et al. by using crystals as disclosed by Berg so as to have more surface area and to use sonochemically aminated TATB as disclosed by Lee et al. so as to have finer-grained TATB so as to increase shock insensitivity (see Lee et al. at abstract).

As to claim 3, Cramer et al. as modified by Berg et al. and Lee et al. further discloses use of RDX (col. 2 lines 10-26; Berg at col. 2 lines 11-17).

As to claim 4, the limitations of claim 1 are disclosed as described above. Not disclosed are the crystals being HMX. Berg, however, discloses the use of HMX (col. 2 lines 11-17). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Cramer et al. as modified by Berg and Lee et al. depending upon use of the composition.

As to claim 5, Cramer et al. as modified by Berg et al. and Lee et al. further disclose the ammonium solution (abstract of Lee et al.).

As to claims 6 and 7, Cramer et al. as modified by Berg et al. and Lee et al. further disclose use of ultrasonic irradiation for amination of TATB with ammonia, and toluene (Lee et al. at col. 2 lines 10-30).

As to claim 10, Cramer et al. as modified by Berg et al. and Lee et al. further disclose a binder (Cramer et al. at col. 2 lines 27-37).

As to claim 12, Cramer et al. as modified by Berg et al. and Lee et al. further disclose the animated TATB having a mean particle diameter of 6 to 8 micrometers ("4.90" micrometers of col. 3 lines 21-22 of Lee et al.).

As to claim 13, the limitations of claim 1 are disclosed as described above. Cramer et al. as modified by Berg et al. and Lee et al. further disclose the TATB having a mean particle diameter of 4.90 micrometers (col. 3 lines 21-22 of Lee et al.). Not disclosed is the TATB being less than 1 micrometer. It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Cramer et al. as modified by Berg and Lee et al. by having the TATB with a mean particle diameter less than 1 micrometer so as to have greater surface area so as to increase solubility rate, if needed.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cramer et al. as modified by Berg et al. and Lee et al. in further view of Highsmith et al. (US 6,425,966 B1).

As to claim 11, the limitations of claim 1 are disclose as described above. Not disclosed is the binder being a polyacrylic elastomer. Highsmith et al, however, discloses an explosive with TATB and HMX (see col. 5 lines 56-65) that uses either chlorotrifluroroethylene or polyacrylates as a binder (col. 5 lines 21-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the method of Cramer et al. as modified by Berg et al. and Lee et al. by

substituting polyacrylate for the binder depending upon availability and cost of the binder material.

(10) Response to Argument

Applicants' argument is that neither Cramer, Berg, Lee et al., nor Highsmith et al. disclose the coating of TATB used to bind the propellant together, especially since Cramer discloses use of a separate binder.

As to this argument, Cramer et al. disclose the coating of TATB penetrating the propellant grains at col. 3 lines 40-41, which states:

> "Preferably, the propellant composition possesses an energetic deterrent coating that penetrates into the surface of the propellant grain component a distance of from about .05 inch to about .25 inch."

With this amount of penetration the TATB is considered to help bind the surfaces of the propellant grain together into one mass. It is also unclear why Applicant indicates that since Cramer uses an additional binder that the TATB in Cramer would not also bind. Note that the instant invention also discloses the use of an additional binder as in dependent claim 10, thus the same argument could be used that the TATB used by Applicant fails to perform any binding. The claims are also of 'comprising' scope and do not preclude the use of additional components nor do they require that the TATB be the sole component performing the binding function. Applicant also argues that Cramer does not call the TATB a binder but this is irrelevant since the TATB will inherently act as a binder when applied as a coating, regardless of its label.

Regarding the Berg reference, this teaching is utilized to show that it is known to use HMX crystals and to coat them. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant also argues that there is no teaching of sonochemically aminated TATB. The Examiner disagrees. Lee clearly teaches the known method of making TATB using sonochemical amination and indicates that the resulting TATB has preferred characteristics such as a finer grain which will increase shock sensitivity (see Lee et al. at abstract). Thus, one of skill in the art when looking at a process for coating TATB onto secondary explosives such as the process disclosed by Cramer would certainly look to the teachings of Lee which suggest that these preferred characteristics are found when producing TATB by sonochemical amination.

Regarding claim 11, the Highsmith patent is being utilized to teach that polyacrylates are known binders for use in explosive composition that contain HMX and TATB. Note that Cramer does indicate that an additional binder may be added so it would be obvious to use the teaching of Highsmith to find other suitable binders for use with HMX and TATB. In response to Applicant's arguments regarding additional portions of the Highsmith reference, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be

treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/Aileen Felton/

Primary Examiner

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

/Gregory L Mills/

Supervisory Patent Examiner, Art Unit 1700

Conferees:

/Jerry A Lorengo/

Supervisory Patent Examiner, Art Unit 1793

/Gregory L Mills/

Supervisory Patent Examiner, Art Unit 1700